

Appln. No. 10/551,263
Amd. dated September 29, 2010
Reply to Office Action of March 31, 2010

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5 (**Cancelled**)

6. (**Currently Amended**) The A modified Staphylococcal enterotoxin B (SEB) having a reduced reactivity with a neutralizing antibody to SEB (anti-SEB antibody), ~~SEB of claim 4~~ wherein the amino acid sequence ~~of from 226 position to 229 position~~ residue position 226 to residue position 229 in the amino acid sequence of SEB as shown in SEQ ID NO:1 is Ala Thr Thr Gln.

7. (**Currently Amended**) The A modified SEB of claim 4 ~~Staphylococcal enterotoxin B (SEB) having a reduced reactivity with a neutralizing antibody to SEB (anti-SEB antibody)~~, wherein the amino acid sequence ~~of from 226 position to 229 position~~ residue position 226 to residue position 229 in the amino acid sequence of SEB as shown in SEQ ID NO:1 is Lys Arg Ile Ile.

8. (**Currently Amended**) The A modified SEB of claim 1 ~~Staphylococcal enterotoxin B (SEB) having a reduced reactivity with a neutralizing antibody to SEB (anti-SEB antibody)~~, wherein

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Asn at ~~23-position~~ residue position 23 in the amino acid sequence of SEB as shown in SEQ ID NO: 1 is substituted with Tyr.

Claims 9-15. (**Cancelled**)

16. (**Currently Amended**) The modified SEB of claim 6, wherein Asn at ~~23-position~~ residue position 23 in the amino acid sequence of SEB as shown in SEQ ID NO: 1 is substituted with Tyr.

17. (**Currently Amended**) The modified SEB of claim 7, wherein Asn at ~~23-position~~ residue position 23 in the amino acid sequence of SEB as shown in SEQ ID NO: 1 is substituted with Tyr.

Claims 18-20 (**Cancelled**).

21. (**Currently Amended**) A modified Staphylococcal enterotoxin B (SEB), having a reduced reactivity with a neutralizing antibody to SEB (anti-SEB antibody), and

capable of being expressed in a soluble form in ~~E. coli~~ Escherichia coli so as to be maintained stably in an aqueous solution and ~~that~~ which modified SEB retains a therapeutic effect to immunopathy equivalent to that of naturally occurring SEB,

wherein the reactivity with anti-SEB antibody is reduced ~~by introducing in the amino acid sequence of SEB as shown in~~ as a result of amino acid substitution at residue positions 226 to 229

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of SEQ ID NO: 1, with the amino acid sequence at residue positions
226 to 229 of SEQ ID NO:1 being substituted with an amino acid
substitution from Lys at 226-position to Lys at 229-position of
Leu Phe Ala Ala, Ala Thr Thr Gln, respectively, or substituted
with Lys Arg Ile Ile, respectively, and

wherein Asn at ~~23-position~~ residue position 23 of SEQ ID
NO:1 is substituted with Tyr.

Claim 22 (**Cancelled**)

23. (**Withdrawn**) In a method for the treatment of
rheumatoid arthritis comprising administration to a patient in
need thereof an effective amount of a treatment agent, the
improvement wherein

the treatment agent comprises the modified SEB of
claim 21.